

Inventory Management Practices and Organizational Performance in Phinorma Poultry Farm Nig Ltd Ngwo Enugu

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ABSTRACT

The study assessed the effect of inventory management practices on organizational performance in Phinorma Poultry farm Nig Ltd Ngwo Enugu (Igwe Anyalogu Poultry farm Ngwo Enugu). Specifically, the study sought to assess the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu and ascertain the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu. The sample size of 88 staff was drawn from 120 employee of Phinorma Poultry farm Nig Ltd Ngwo Enugu. Research questions of the study were answered using mean score and standard deviation. The hypotheses stated were tested using regression analysis. The empirical findings of the study show that Economic order quantity (EOQ) inventory practice has significant effect on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu (t – statistics (5.887); P-values (0.000) < Sig-value 0.05) and Just-in-time (JIT) inventory practice has significant effect on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu (t – statistics (6.446); P-values (0.000) < Sig-value 0.05). The study recommended that management of Phinorma Poultry farm Nig Ltd Ngwo Enugu should closely monitor

and manipulate their inventory system to maintain production consistency for organizational profitability and effectiveness. Management of Phinorma Poultry farm Nig Ltd Ngwo Enugu should provide and maximize space for timely delivery to avoid staying off production.

Keywords: Inventory Management practices; Economic order quantity (EOQ) inventory practice and Just-in-time (JIT) inventory practice

INTRODUCTION

Today's competitive business world has placed companies on edge as they strive to set up strategies that will properly position their performance towards satisfying the demand of their customers who want customized goods and services at no extra cost. Companies are exploring ways toward postponement strategy in response to constant changing demand (Mbugi & Deusdedita, 2022). Inventory management is pivotal in having effective and efficient organization. It is also vital in the control of materials and goods that have to be held (or stored) for later use in the case of production or later exchange activities in the case of services. The principal goal of inventory management involves having to balance the conflicting economics of not wanting to hold too much stock, thereby having to tie up capital so as to guide

against the incurring of costs, such as storage, spoilage, pilferage and obsolescence and, the desire to make items or goods available when and where required (quality and quantity wise) so as to avert the cost of not meeting such requirement (Gemachis, Khan & Mohd-Abass, 2022).

Inventory management is recognized as a vital tool in improving asset productivity and inventory turns, targeting customers and positioning products in diverse markets, enhancing intra and inter-organizational networks, enriching technological capabilities to produce quality products thereby imparting effectiveness in inter-firm relationships. Proper inventory management even results in enhancing competitive ability and market share of small manufacturing units (Otuya & Eginwin, 2017). Well managed inventories can give companies a competitive advantage and result in superior organizational performance (Ramos, Pettit, Flanigan, Romero & Huayta, 2020). Management of inventory is also fundamental to the success and growth of organization as the entire profitability of an organization is tied to the volume of products sold which has a direct relationship with the quality of the product (Muchaendepi, Mbohwa, Hamandishe & Kanyepe, 2019). The various inventory management best practices that have been adopted by organizations include Economic Order Quantity model (EOQ), Just In Time (JIT), Vendor Managed Inventory (VMI), Collaborative Planning (CP), forecasting and replenishment, automatic replenishment, agile system, and material requirement planning and so on. However, some researchers have suggested that managers who turn to inventory research may find it to be of little significance or conclude that it has little to offer in terms of enhancing inventory practices (Agu, Obi-Anike, Eke, 2019). Oluwabunmi, Aminu and Ahmed, (2020) asserts that inventory constitutes the most significant part of the current assets of majority of the Phinorma Poultry farm Nigeria Limited. Therefore, due to the relative largeness of inventories

maintained by the company, considerable sum of the company's funds is being committed to them. It therefore becomes absolutely imperative to manage inventories effectively so as to avoid unnecessary cost, back order penalties during periods of peak demand by customers and ensure high level of customer service.

The studies on the relationship between inventory management practices and performance of manufacturing companies in Nigeria have focused majorly on the techniques for controlling inventories such as EOQ model, Just-in-Time technique, associated with variables such as profitability, customer satisfaction, and efficient delivery. Also, despite several models (both deterministic and stochastic) that have been adopted in practice by manufacturing firms, an assessment of inventory management techniques in the Phinorma Poultry farm Nigeria Limited are currently lacking. Previous studies such as Orga & Mbah, (2017); Olanipon, Akinola & Oladele, (2022) and so on, have related inventory management techniques with various aspects of organizational performance such as financial and economic performance. Very limited studies have been carried out on inventory management techniques in the Phinorma Poultry farm Nigeria Limited. It is therefore evident that knowledge gap exists. This study intends to bridge this gap by assessing the effect of inventory management on organizational performance in Phinorma Poultry farm Nigeria Limited as case study.

Statement of the Problem

Inventory is the life blood of any organization. This is because inventory contributes directly to the profitability of an organization more so the growth of any organization depends largely on its ability to manage its inventory effectively and efficiently. The real problem therefore has been in the determination of the best inventory control method that fits into an organization very well and also to get the best inventory level at which money

invested in inventory will produce a rate of return higher than it if invested in some other areas of the business.

Due to the current instabilities in the economy of Nigeria, consumable goods firms are faced with the extreme changes in customers' demands for their products. This problem needs to be solved and information necessary to find the solution stock out which to be discussed before undertaking any projects. A company will ideally want to have enough stocks to satisfy the demand of its customers. On the other hand, the company does not want to have too much inventory staying on hand because of the cost of carrying inventory.

The concern is not only to shareholders but also to management and the growth of the nation. How the effective inventory policy affects the firm's performance, with size as control variable has not been determined within or outside the Nigerian context. Again, there have been a lot of difficulties in determining the desired stock levels that ensures a free flow of materials without incurring heavy expenses in stocking those materials and without any stock being rendered obsolete. There have been losses of sales as a result of insufficient inventories of finished goods. In addition, there have been low productivity in the company as a result of poor inventory model used by the company. This statement of problem may be examined through an assessment of the inventory management practices and organizational performance in Phinorma Poultry Farm Nig Ltd (Igwe Anyalogu Poultry farm Ngwo Enugu).

Objectives of the Study

The main objective of this study was the assessment of inventory management practices and organizational performance in Phinorma Poultry farm Nig Ltd Ngwo Enugu (Igwe Anyalogu Poultry farm Ngwo Enugu). Specifically, the study sought to;

- I. assess the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

- II. ascertain the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

Research Questions

The following are the research questions of the study;

- I. What is the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu?
- II. What is the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu?

Significance of the Study

This study is beneficial and important the following of group of individual and persons namely: management of Phinorma Poultry farm Nig Ltd Ngwo Enugu, founder and researchers

The outcome of this study stands to be of great benefit to the founder of Phinorma Poultry farm Nig Ltd Ngwo Enugu because it help the company to improve in areas where it is needed in their inventory operations so as to boost their profitability and consequently increase their shareholders wealth, and to assist the organizations to maximize their profits and reduce their risk of liquidity.

Findings from this study assist the inventory managers in decision making regarding the appropriate level of inventory to be kept in the store in order to guarantee that customers are accorded proper service level. In addition, the outcomes of the study would help finance managers in determining what factors to consider when making inventory decisions.

The findings of the study will serve as a reference material for future researchers in this area. Also, the results will throw more light on examining inventory management practices and organizational performance in Phinorma Poultry farm Nig Ltd Ngwo Enugu. It will also be beneficial to prospective students who will need some

information contained in this work to guide their own research work which is related to the present study.

Conceptual Literature

Inventory Management Practices

Inventory management has to do with art and science of maintaining stock levels of a given group of items incurring the least cost consistent with other relevant targets and objectives set by management (Olanipon, Akinola & Oladele, 2022). It refers to the integration of information, transportation, acquisition, inspection, material handling, warehousing, packaging and control of supplies and ensuring security of inventory (Akinlabi, Asikhia & Obamiro, 2018).

Nwangbebu, Oketa, Nwambe and Nweke, (2019) described inventory management as a process of recording and monitoring the level of stocks, forecasting the future demand and a decision on when and how order could be executed. Agum, Awogbemi, Olanrewaju and Anyuabaga, (2018) see inventory management as a fine lines between the replenishment lead time, carrying costs, asset management, inventory forecasting, valuation of inventory, future inventory price forecasting, physical inventory, inventory visibility, available space for inventory, quality management, replenishment, returns, defective goods and demand forecasting. The researchers further described inventory management as planning and control. The planning facet involves looking ahead in terms of the determination in advance of the following: What quantity of items to order; how often (periodicity) should firms order for them to maintain the overall stock coordination in an economically efficient way? The control facet, otherwise regarded as control means following the procedure, set up at the planning stage to achieve the objective of stock management (Akinlabi, 2021; Agum, Awogbemi & Taimako, 2018).

Organizational Performance

Organizational performance remains a central theme in contemporary literature and

scholars are continuously discussing various factors such as organizational structure, strategic innovation and human capital human capital that inform performance in diverse organizations (Oduonye, Azuogalanya & Igbanugo, 2022). Okeke, (2016) define performance as a measure of monetary and non- monetary pointers that indicate evidence about the grade of achievement of the organization's objectives. In most studies, performance measurement has been limited to a financial perspective, leading to various restrictions like emphasis on the internal factors of the company and overdue accessibility of performance-related information.

To overwhelmed these restrictions performance has to be measured as a multidimensional that includes financial and non-financial indicators (Mbugi & Deusdedita, 2022). For example, nonfinancial organizational performance can be attained by improvement of product quality, refining production efficiency, responsiveness to customers' needs, customers' satisfaction, while financial indicators as profitability, return on investment, sales and lastly its market share.

Inventory Management Practices and Organizational Performance

ABC Analysis

This is the division of inventories into categories of total annual usage, so that the more valuable items can be recognized for special attention 'A' items are the most valuable 'B' are intermediate and 'C' are the least-value items (Onchoke & Wanyoike, 2016). It is also called Pareto analysis rule of 80/20 which suggests that 20% of inventory items need 80% of the attention while the remaining 80% of items need only 20% of the attention. The ABC inventory control technique is based on the principle that a small portion of the items may typically represent the bulk of money value of the total inventory used in the production process, while a relatively large number of items may form a small part of the money value of stores (Ondyeki, 2019). The money

value is ascertained by multiplying the quantity of material of each item by its unit price. According to this approach, high value items are more closely controlled than low value items.

Otuya and Eginwin, (2017) states that Pareto Analysis often called ABC analysis was named after an Italian philosopher and economists Wilfred Pareto and it brings out a range of stock items split into three classes called AB&C. Typically 70% of the total demand for stock is due to only 10% of the items; class A. another 20% of the items account for a further 20% of demand; class B. And that leaves class C comprising 70% of the items or lines in stock but accounting for only 10% of the demand in monetary terms. Most of the money goes on an item so it's economical to order frequently, control highly, calculate requirements as exactly as possible. Shortages are presented by frequent checks and energetic chasing rather than buffer stocks. Very little money goes to C items and it's economical to order infrequently, control loosely, estimate requirements roughly and prevent shortages by ample buffer stocks.

Economic Order Quantity

The Economic Order Quantity (EOQ) is an ordered quantity that minimizes an institution's ordering cost and also the inventory holding costs (Medard, 2017). According to Mercado, (2017), EOQ is quantity ordered that minimizes total variable costs of inventory (holding and ordering costs). It is also the number of units that a company should add to inventory with each order to minimize the total costs of inventory - such as holding costs, order costs, and shortage costs. The EOQ gives the optimal quantity that a company is to order every time when replenishing its stock (Agu, Obi-Anike, Eke, 2019). The quantity offers a good suggestion of whether or not current order quantities are reasonable. The EOQ is used as part of a continuous review inventory system, in which the level of inventory is monitored at all times, and a fixed quantity

is ordered each time the inventory level reaches a specific reorder point. Oluwabunmi, Aminu and Ahmed, (2020) argue that EOQ is one of the models widely used to manage inventory in many industries. Orga and Mbah, (2017) defined EOQ as the point where total inventory costs are minimized. It the level of inventory that minimizes the total of inventory holding costs and ordering costs.

Theoretical Review

Deterministic Inventory Model (DIM)

The Economic Order Quantity (EOQ) is one most common deterministic inventory models. The EOQ is a mathematical model formulated within the scope of operations management to determine the optimal inventory level. Prempeh, (2019) stated that Economic Order Quantity (EOQ) model is an approach of determining the optimal inventory level that takes into account the inventory carrying costs, stock-out costs and total costs which are helpful in the determination of the appropriate inventory levels to hold. EOQ is the level of inventory that minimizes total inventory holding costs and ordering costs.

The framework used to determine this order quantity is also known as Wilson EOQ Model or Wilson Formula. The model was developed by F. W. Harris in 1913 and is also known as Wilson EOQ model, who critically analyzed the model. However, R. H. Wilson, a consultant who applied it extensively, has been given credit for his in-depth analysis (William, 2007). EOQ only applies when demand for a product is constant over the year and that each new order is delivered in full when the inventory reaches zero. There is a fixed cost charged for each order placed, regardless of the number of units ordered. There is also a holding or storage cost for each unit held in storage (William, 2007). EOQ is used to obtain the optimal number of units of the product to order so that to minimize the total cost associated with the purchase, delivery and storage of the product The required parameters to the solution are the total

demand for the year, the purchase cost for each item, the fixed cost to place the order and the storage cost for each item per year. Note that the number of times an order is placed also affects the total cost; however, this number can be determined from the other parameters (Oduonye, Azuogalanya & Igbanugo, 2022). EOQ assumes that, the ordering cost is constant, the rate of demand is constant, the lead time is fixed, the purchase price of the item is constant that is no discount is available, the replenishment is made instantaneously, and the whole batch is delivered at once. EOQ is the quantity to order, so that ordering cost plus carrying cost finds its minimum.

Empirical Literature

Oduonye, Azuogalanya and Igbanugo, (2022) examined the relationship between inventory management and productivity of manufacturing organizations in Anambra State. Specifically, the study sought to assess the relationship between inventory management and organizational productivity and to evaluate the nature of correlation between inventory management and organizational profitability among others. Descriptive research survey method was employed; population of the study is fifteen thousand two hundred and five. Sample size of two hundred and fifty (250) was derived using the Godden's formula for sample size determination from 5,205 populations. Pearson product moment correlation coefficients were used in the hypotheses testing. From the analyses, it was discovered that retain investment and share dividends are positively related to profit while market share and share dividends are negatively related to dependent variable. The Findings indicate that there is significant relationship between good inventory management and organizational effectiveness and inventory management has a significant effect on organizational productivity. The study recommended that organizations should diversify their inventory system to suit specific needs of production, and that

management should closely monitor and manipulate their inventory system to maintain production consistency for organizational profitability and effectiveness and cost minimization techniques should be employed in the keeping and allocation of inventory among others.

Mbugi and Deusdedita, (2022) conducted a study to examine effect of inventory control management systems on organization performance in Tanzania manufacturing industry. The specific objectives of the study were to: determine the types and purposes of inventory control management practices followed ascertain the influence of inventory control management practices on organizational performance and determine how technology adopted in operationalization of inventory control management practices affect organization performance. Data was analyzed using content analysis techniques with the aid of Nvivo Qualitative Analysis software. The findings of the study revealed that the food and beverage manufacturing company had evidence of different types of inventories which included raw materials, work-in-progress and finished goods managed under FIFO system for cost reduction and production efficiency. It was also evident that the company carried inventory control management using perpetual inventory system done on periodic basis and inventory system is combined with a computerized database of inventory quantities at various locations for up-dating in real time by store and warehouse using barcode scanners. It was also revealed that inventory control management system using principles of Economic order quantity [EOQ] affects organizational performance in terms of cost reduction, production efficiency, flexibility and profitability. The study recommends an implementation of new practices/models such as Vendor Managed Inventory (VMI) in the company's inventory control management.

Olusuyi, Obafemi and Araoye, (2021) ascertained the relationship between

effective inventory management practice and firms performance of selected consumable goods firms on Nigeria stock exchange for a ten (10) year period from 2009-2019. The specific objectives of the study were to examine to identify the effect of inventory procurement cost, inventory usage and value of stock on return on capital employed, firm growth and return on investment respectively. This study used panel data that was sourced from publications of Nigeria stock exchange, fact books, annual reports and account of the listed brewery firms from 2009 – 2019. Correlation co-efficient and ordinary least square (OLS) regression method with the aid of STATA 13 statistical package was used to analyse the data. The findings revealed a significant positive relationship between return on capital employed, firm growth and effective inventory management practice at 5% significant level; a positive and non-significant relationship between return on investment and effective inventory management practice. This study recommended amongst others that consumable goods firms' management should emphasis on the proper effective inventory management practice techniques and measuring of efficiency deviations to identify weaknesses in the process of managing inventories.

Olaniyan, Akinde, Adegbola, Aladesoun and Ayoade, (2020) examined the impacts of inventory management practices on organization performance in selected stores and supermarket in Osogbo, Osun State. The objectives of this study are to: determine the effect of inventory management practices on organizational growth of selected stores and supermarkets; examine the effect of inventory management practices on organizational profitability of selected stores and supermarkets; and identify the effect of inventory management practices on sales turnover of stores and supermarkets. This study adopted cross sectional descriptive research design. The data analytical technique was Ordinary least square

method. The study found that the efficient inventory management practices positively affect organizational growth, profitability and sales turnover of firms. This study concludes that stores and supermarkets with proper inventory management system are likely to grow and satisfy customers and shareholders. The study recommended that management of various organization should ensure a constant review of various inventory management practices in the stores to enable them maintain profitability and consistently. Also, the management of various organizations, especially the stores and supermarkets should see the need to install inventory systems that will enable business success, which will thereby bring about organizational growth.

Agu, Obi-Anike and Eke, (2019) conducted a study to examine the effect of inventory management on the organizational performance of the selected manufacturing firms. The study sought to ascertain the extent at which inventory control affect the productivity of selected manufacturing firms, to determine the nature of the relationship between demand management and customer satisfaction of selected manufacturing firms and to determine the effect of Just – in- time on the growth of selected manufacturing firms. The study sample size of 285 respondents was drawn from population size of 996 staff of selected manufacturing firms. The descriptive survey research design was adopted for the study. The hypotheses were tested using Pearson product moment correlation coefficient and simple linear regression statistical tools. The findings indicate that inventory control significantly affects productivity of selected manufacturing firms ($r = 0.849$; $t = 27.726$; $F = 768.754$; $p < 0.05$). There is a positive relationship between demand management and customer satisfaction of selected manufacturing firms ($r = .799$, $P < .05$). Just – in – time has a significant effects on growth of the selected manufacturing firms ($r = .885$; $t = 32.865$; $F = 1080.094$; $p < 0.05$). The study recommended that organizations should train their personnel in the area of

inventory control management that will empower them to be in charge for the smooth running of the inventory management activities or program.

Ugwu and Nwakoby, (2018) examined the impact of inventory management on firm performance in Nigeria in Grass Roots Opinion. Other specific objectives are to determine the impact of ABC model; Low, medium, high model; and Economic order quantity EOQ models on firm performance. The research design was survey method. The sampled 10 firms with populations of 710 staff strength; while Taro Yamane formulae was used to arrive at 400 staff who formed our respondents. The method of analyses applied descriptive statistics; Pearson Correlation and OLS regression. The result shows that the Adjusted R-squared value of 0.879, which is 88% of the systematic variations in the dependent variable in the pooled firms, was jointly explained by the independent variables (ABC, LMH, and EOQ) on firm stock management. The F-statistic value of 429.250 with P-value of 0.0000 shows that the OLS pooled model on the overall is statistically significant @ 5% level. Other findings of the explanatory variables are: ABC; LMH; and EOQ inventory models have positive significant impact on firm performance in Nigeria. The study concludes that inventory management model techniques tested have positive significant impact on firm performance. This study is important to the manufacturing firms in Nigeria because it provides the guidelines to the management of firms on stock management models that minimizes stock waste and impact corporate performances.

Akinlabi, Asikhia and Obamiro, (2018) examined effect of inventory management practices on the operational performance of flour milling companies in Nigeria. Specifically, the study sought to determine the effect of inventory management practices, inventory shrinkage and inventory control on operational performance. Cross-sectional survey research design was used.

The target population comprised 2,237 staff of selected flour milling companies. A stratified random sampling technique was used to select the sample size of 776. A structured questionnaire was used to collect data. The methods of data analysis were descriptive and inferential statistics. Hypotheses were tested using inferential statistics with the aid of SPSS. The findings revealed that inventory shrinkage had a significant negative effect on customers' satisfaction. There was a significant relationship between inventory control and cost effectiveness of selected flour milling companies. The study concluded that inventory management practices significantly affect operational performance of flour milling companies in Nigeria. The stud recommended that management of flour milling companies in Nigeria should focus on ensuring that stocks are sufficient to meet production requirements and customer demands at all times.

Literature Gaps

Owing to the literature review, Agu, Obi-Anike and Eke, (2019) conducted a study to examine the effect of inventory management on the organizational performance of the selected manufacturing firms. The study failed to point out inventory management practices and sample size was small. The study will bridge the literature gaps by assessing inventory management practices and organizational performance in Phinorma Poultry farm Nig Ltd Ngwo Enugu (Igwe Anyalogu Poultry farm Ngwo Enugu).

MATERIALS & METHODS

The research design was descriptive survey method. Study Area was Enugu State. The sample size of 92 respondents were drawn from population of 120 staff of Phinorma Poultry farm Nig Ltd Ngwo Enugu (Igwe Anyalogu Poultry farm Ngwo Enugu). The choice for only staff of poultry farm was due to accessibility and availability of data. The study used structured questionnaire to obtain data.

STATISTICAL ANALYSIS

Research questions of the study were answered using mean score and standard deviation. The hypotheses stated will be tested using single regression analysis. Methods of data presentation was table.

Statistical Package for Social Science (SPSS) is computer Application Software was used for the data analysis.

Data Presentation and Analysis

Table 1: Comprehensive Demographic of Respondents

TITLE	FREQUENCY	PERCENTAGE
Questionnaire Distribution		
Questionnaires Distributed	92	100%
Returned Questionnaires	88	95%
Not Returned Questionnaires	4	5.0%
Gender		
Female	72	82.24%
Male	16	18.6%
Age Bracket		
20-30 Years	19	22.0%
31-40 Years	9	10.2%
41-50 Years	43	28.4%
51Years – above	17	19.3%
Marital Status		
Married	45	51.4%
Single	35	40.0%
Widow/widower	4	4.5%
Divorce	4	4.5%
Academic Qualifications		
FLSC	15	17.0%
SSCE	29	33.0%
NCE/OND	38	43.1%
Bsc/BA	6	6.8%

Sources: Field Survey, 2023

Ninety two (92) copies of questionnaires were designed and distributed to the respondents. Out of the 92 Questionnaires distributed, 88 (95%) were completed and returned while 18 (5%) were not returned. Therefore, 95 percent respondents were a good representation. The study showed the respondents profile in frequency and

percentage distribution of gender, age bracket and marital status.

Question One: What is the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu?

Table 2. Mean rating of the respondents on what is the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu

S/N	Questionnaire Item	SA (5)	A (4)	UD (3)	D (2)	SD (1)	Total	Mean	SD
1	The inventory technique is pivotal in having effective and efficient organization.	210	68	42	20	5	345	3.920	0.102
		42	17	14	10	5	88		
		47%	20%	16%	11%	6%	100%		
2	The inventory technique ensures optimal ordering quantity for an item of stock that aids in the minimization of costs	210	68	36	22	6	342	3.886	0.088
		42	17	12	11	6	88		
		47%	20%	14%	13%	6%	100%		
3	The inventory technique provides a continuous review inventory system in	230	84	36	14	2	366	4.159	0.098
		46	21	12	7	2	88		
		52%	24%	14%	8%	2%	100%		

	which the level of inventory is monitored at all times								
4	The inventory technique provides control of materials and goods that have to be stored for later use in production	245 49 57%	80 20 19%	36 12 11%	10 5 7%	2 2 5%	372 88 100%	4.227	0.093
	Grand Mean							4.048	0.0955

Source: Field Survey, 2023

This table shows that the respondents indicated their option on what is the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu. The respondents are in agreement with all the items. The study revealed that Economic order quantity (EOQ) inventory practice has significant effect on operational effectiveness in

Phinorma Poultry farm Nig Ltd Ngwo Enugu since inventory technique ensures optimal ordering quantity for an item of stock that aids in the minimization of costs (Grand mean (3.829) is greater than cut-off mean (3).

Question Two: What is the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu?

Table 3: Mean rating of the responses on what is the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu?

S/N	Questionnaire Item	SA (5)	A (4)	UD (3)	D (2)	SD (1)	Total	Mean	SD
1	The inventory technique maintains just enough material in just the right place at just the right time to make first the right amount of the product.	230 46 52%	68 17 20%	30 10 11%	20 10 11%	5 5 6%	353 88 100%	4.011	0.102
2	The inventory technique helps in maintaining adequate inventory level	210 43 49%	68 17 20%	36 12 14%	20 10 11%	6 6 6%	340 88 100%	3.863	0.088
3	The inventory technique involves supervision of the storage, supply and accessibility of items to ensure an adequate supply	230 46 52%	80 20 23%	36 12 14%	14 7 8%	3 3 3%	363 88 100%	4.125	0.098
4	The inventory technique provides supervision of the supply to avoid excessive oversupply	245 49 57%	80 20 23%	30 10 11%	10 5 5%	4 4 4%	372 88 100%	4.193	0.093
	Grand Mean							4.047	0.0985

Source: Field Survey, 2023

This table shows that the respondents indicated their option on what is the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu. The respondents are in agreement with all the items. The study revealed that Just-in-time (JIT) inventory

practice has significant effect on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu since inventory technique involves supervision of the storage, supply and accessibility of items to ensure an adequate supply (Grand mean (3.671) is greater than cut-off mean (3).

Test of Hypotheses

The two hypotheses were tested and a decision taken is based on the rule below.

Decision rule: Reject H_0 if P-value > 0.01

Hypothesis One

H_1 = Economic order quantity (EOQ) inventory practice has no significant effect on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947 ^a	.897	.897	.33681

a. Predictors: (Constant), Economic order quantity (EOQ) inventory practice

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.071	1	2.071	9.208	.000 ^b
	Residual	19.626	87	.225		
	Total	21.646	88			

a. Dependent Variable: Operational effectiveness
b. Predictors: (Constant), Economic order quantity (EOQ) inventory practice

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.057	.110		.515	.607
	Economic order quantity (EOQ) inventory practice	.382	.065	.947	5.887	.000

a. Dependent Variable: Operational effectiveness

In testing this hypothesis, economic order quantity (EOQ) inventory practice was regressed against operational effectiveness. The result of the single-regression analysis showed the model to assess the effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

Operational Effectiveness = 0.057 + 0.382 Economic order quantity (EOQ) inventory practice

The empirical result showed that the coefficient of economic order quantity (EOQ) inventory practice has positive effect on operational effectiveness; it means that economic order quantity (EOQ) inventory practice has positive and direct effect on operational effectiveness. The results of the t – statistics denoted that the coefficient was statistically significance. This is because observed values of t – statistics (5.887) is greater than its P-values (0.000). The results

of the F – statistical test showed that the overall regression of the hypothesis one was statistically significance. This was because observed value of the F – statistics (9.208) was greater than its P-value (0.000). Again, our empirical result showed that the Pearson product moment correlation analysis (r) was 0.947. The strength of relationship between the two variables was high. However, we rejected the null hypothesis and concluded that Economic order quantity (EOQ) inventory practice has significant effect on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu (t – statistics (5.887); P-values (0.000) < Sig-value 0.05).

Test of Hypothesis Two

H_2 = Just-in-time (JIT) inventory practice has no significant effect on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931 ^a	.866	.865	.26055
a. Predictors: (Constant), Just-in-time (JIT) inventory practice				

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.793	1	17.793	8.604	.000 ^b
	Residual	179.916	87	2.068		
	Total	197.709	88			
a. Dependent Variable: Cost effectiveness						
b. Predictors: (Constant), Just-in-time (JIT) inventory practice						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.614	.089		18.111	.000
	Just-in-time (JIT) inventory practice	.309	.048	.931	6.446	.000
a. Dependent Variable: Cost effectiveness						

In testing this hypothesis, just-in-time (JIT) inventory practice was regressed against cost effectiveness. The result of the single-regression analysis showed the model to ascertain the effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

Cost effectiveness = 1.614 + 0.309 Just-in-time (JIT) inventory practice Project team motivation practice

The empirical result showed that the coefficient of just-in-time (JIT) inventory practice has positive effect on cost effectiveness; it means that just-in-time (JIT) inventory practice has positive and direct influence on cost effectiveness. The results of the t – statistics denoted that the coefficient of just-in-time (JIT) inventory practice was statistically significance. This is because observed values of t – statistics (6.446) was greater than its P-values (0.000). The results of the F – statistical test showed that the overall regression of the hypothesis two was statistically significance. This was because observed value of the F – statistics (8.604) was great than its P-value (0.000). Again, our empirical result showed that the Pearson product moment correlation analysis (r) was 0.931. The strength of relationship between

the two variables was high. However, we rejected the null hypothesis and concluded that Just-in-time (JIT) inventory practice has no significant effect on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu (t – statistics (6.446); P-values (0.000) < Sig-value 0.05)

DISCUSSION OF FINDINGS

Effect of economic order quantity (EOQ) inventory practice on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

The findings of the study revealed that Economic order quantity (EOQ) inventory practice has significant effect on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu since inventory technique ensures optimal ordering quantity for an item of stock that aids in the minimization of costs (t – statistics (5.887); P-values (0.000) < Sig-value 0.05). The outcome of the study is in line with the study of Oduonye, Azuogalanya and Igbanugo, (2022) that examined the relationship between inventory management and productivity of manufacturing organizations in Anambra State. Specifically, the study sought to assess the relationship between inventory management and organizational productivity and to evaluate the nature of

correlation between inventory management and organizational profitability among others. Descriptive research survey method was employed; population of the study is fifteen thousand two hundred and five. Sample size of two hundred and fifty (250) was derived using the Godden's formula for sample size determination from 5,205 populations. Pearson product moment correlation coefficients were used in the hypotheses testing. From the analyses, it was discovered that retain investment and share dividends are positively related to profit while market share and share dividends are negatively related to dependent variable. The Findings indicate that there is significant relationship between good inventory management and organizational effectiveness and inventory management has a significant effect on organizational productivity.

Effect of just-in-time (JIT) inventory practice on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu.

The findings of the study revealed that Just-in-time (JIT) inventory practice has significant effect on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu since inventory technique involves supervision of the storage, supply and accessibility of items to ensure an adequate supply (t – statistics (6.446); P-values (0.000) < Sig-value 0.05). The outcome of the study is not in line with the study of Olusuyi, Obafemi and Araoye, (2021) that ascertained the relationship between effective inventory management practice and firms performance of selected consumable goods firms on Nigeria stock exchange for a ten (10) year period from 2009-2019. The specific objectives of the study were to examine to identify the effect of inventory procurement cost, inventory usage and value of stock on return on capital employed, firm growth and return on investment respectively. This study used panel data that was sourced from publications of Nigeria stock exchange, fact books, annual reports and account of the

listed brewery firms from 2009 – 2019. Correlation co-efficient and ordinary least square (OLS) regression method with the aid of STATA 13 statistical package was used to analyse the data. The findings revealed a significant positive relationship between return on capital employed, firm growth and effective inventory management practice at 5% significant level; a positive and non-significant relationship between return on investment and effective inventory management practice.

Summary of Findings

The following are the major findings of the study:

The study revealed that Economic order quantity (EOQ) inventory practice has significant effect on operational effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu since inventory technique ensures optimal ordering quantity for an item of stock that aids in the minimization of costs (t – statistics (5.887); P-values (0.000) < Sig-value 0.05)

The study revealed that Just-in-time (JIT) inventory practice has significant effect on cost effectiveness in Phinorma Poultry farm Nig Ltd Ngwo Enugu since inventory technique involves supervision of the storage, supply and accessibility of items to ensure an adequate supply (t – statistics (6.446); P-values (0.000) < Sig-value 0.05).

CONCLUSION

The study concluded that inventory management practices has positive and significant effect on organizational performance in Phinorma Poultry farm Nig Ltd Ngwo Enugu since Economic Order Quantity (EOQ) inventory management technique is pivotal in having effective and efficient organization, Just in Time (JIT) inventory management technique helps in maintaining adequate inventory level, ABC analysis inventory management technique ensures that required quality of stock is always available at the minimum costs, Max-Min System inventory management technique improves the return on investment

of the business by reducing in-process inventory and its associated costs and periodic review system of inventory management technique always give a competitive advantage to the business over its competitors.

The adopted perpetual inventory control system that applied the principles of Economic Order Quantity (EOQ) enabled the Phinorma Poultry farm Nig Ltd Ngwo Enugu to know the extent to which an item ought to be ordered, not only that but also at what exact time it should be ordered to meet customers, demand and subsequently their satisfaction. Second, the use of the computerized inventory control management system and other inventory management practices when properly applied positively, they there are able contribute to the company's performance in terms of employees' productivity, cost reduction, production efficiency, timely product delivery, and customer satisfaction.

Recommendation

Management of Phinorma Poultry farm Nig Ltd Ngwo Enugu should closely monitor and manipulate their inventory system to maintain production consistency for organizational profitability and effectiveness. Management of Phinorma Poultry farm Nig Ltd Ngwo Enugu should provide and maximize space for timely delivery to avoid staying off production.

Management of Phinorma Poultry farm Nig Ltd Ngwo Enugu should encourage on-the-job and off-the-job training and development to their personnel in the area of inventory control management that will empower them to be in charge for smooth running of the inventory management activities or program.

Declaration by Authors

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